

Notice of Allowability

Application No.

09/726,087

Examiner

LaShonda T. Jacobs

Applicant(s)

RHODES, DAVID L.

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE Amendment filed on December 9, 2005.
2. ☒ The allowed claim(s) is/are 1-16, 19-40, 42-56 and 59-75.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

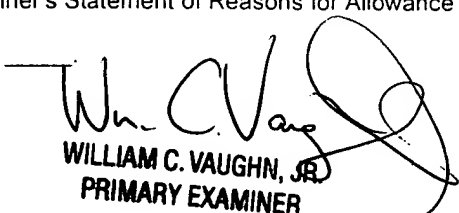
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☒ to Paper No./Mail Date October 4, 2004.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other


WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Cary Kappel Reg. No. 36,561 on January 19, 2006.

IN THE CLAIMS

Please cancel claims 17, 18, 41, 57 and 58 without prejudice or disclaimer.

Please amend claims 1, 3, 7, 19-23, 27-30, 40, 44, 53 and 59-63.

1. (Currently Amended) A network, comprising

a plurality of hosts constructed and arranged for the transfer of digital information between the hosts, the plurality of hosts including

- a first host acting as a source host;
- a second host acting as a destination host;
- a third host acting as a collaborating host; and,
- a management object constructed and arranged to facilitate collaboration between the source host and the collaborating host in transferring data between the source host and the destination host, the management object monitoring network status to determine if a need exists based on one of network congestion, load balancing, transfer latency and

effective bandwidth ~~the network status~~, wherein:

if the need exists, the management object instructs the source host to provides necessary control information ~~and/or~~ and message contents to the collaborating host, and the collaborating host sends the data to the destination host in such a way as to make the destination host believe the data is from the source host; and

if the need does not exist, the management object does not instruct the source host to provide said necessary control information and ~~or~~ message contents to the collaborating host, and the source host sends the data to the destination host.

3. (Currently Amended) The network of claim 1 wherein the ~~masquerading~~ collaborating hosts are simple hardware elements.

7. (Currently Amended) The network of claim 1 wherein ~~the source host, the destination host and the~~ a plurality of collaborating hosts are provided and the plurality of collaborating hosts form a rim of hosts.

19. (Currently Amended) The network of ~~claim 15~~ claim 1 wherein the load balancing further comprises balancing CPU usage.

20. (Currently Amended) The network of ~~claim 15~~ claim 1 wherein the load balancing further comprises balancing memory usage.

21. (Currently Amended) The network of ~~claim 15~~ claim 1 wherein the load balancing further comprises balancing disk space usage.

22. (Currently Amended) The network of ~~claim 15~~ claim 1 wherein the load balancing further comprises balancing host bandwidth.

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23. (Currently Amended) The network of ~~claim 15~~ claim 1 wherein the load balancing further comprises balancing server loading.

27. (Currently Amended) The network of claim 1 wherein the management object monitors network status by monitoring the network information, said network information including ~~comprises~~ ICMP error packets.

28. (Currently Amended) The network of claim 1 wherein the management object monitors network status by monitoring the network information, said network information including ~~comprises~~ a reverse flow of packet loss information.

29. (Currently Amended) The network of claim 1 wherein the management object monitors network status by monitoring the network information, said network information including ~~comprises~~ traffic congestion information.

30. (Currently Amended) The network of claim 1 wherein the management object monitors network status by monitoring the network information, said network information including ~~comprises~~ message buffer status indicators from the destination host.

40. (Currently Amended) The network of claim 36 wherein the transfer of digital information between host is implemented via communication hand-off ~~further comprises~~ Internet TCP socket hand-off among the hosts.

44. (Currently Amended) The system of claim 40 wherein ~~the~~ upper level communication is via TCP, and wherein ~~source~~ collaboration between source host and collaborating host includes exchange of sequence and acknowledgment information.

53. (Currently Amended) A method of communicating over a network comprising the steps of:

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obtaining network information;

determining from the network information if a need exists based on one of
network congestion, load balancing, transfer latency, and effective bandwidth network
status;

if the need exists:

sending data intended for a destination host, from a source host to a host
acting as a collaborating host;

facilitating collaboration between the source host and the collaborating
host;

sending the data to the destination host from the collaborating host so that
the destination host believes the data came from the source host; and

if the need does not exist:

sending data intended for a destination host, from the source host to the
destination host without sending said data to any host acting as a collaborating
host .

59. (Currently Amended) The method of claim 53 ~~58~~ wherein the load balancing is server
load balancing.

60. (Currently Amended) The method of claim 53 ~~58~~ wherein the load balancing is CPU
load balancing.

61. (Currently Amended) The method of claim 53 ~~58~~ wherein the load balancing is
balancing memory usage.

62. (Currently Amended) The method of claim 53 ~~58~~ wherein the load balancing is

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balancing disk space usage.

63. (Currently Amended) The method of claim 53 ~~58~~ wherein the load balancing is host bandwidth load balancing.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance: the closest prior art of record (Templin et al., U.S. Pat. No. 5,132,992 and Brendel et al., U.S. Pat. No. 5,774,660) et al does not teach nor suggest in detail a management object constructed and arranged to facilitate collaboration between the source host and the collaborating host in transferring data between the source host and the destination host, the management object monitoring network status to determine if a need exists based on one of network congestion, load balancing, transfer latency and effective bandwidth in combination with all the elements of the independent claim as argued by the Applicant (see Applicant's Arguments dated may 16, 2005 and pages 4, lines 25-26, page 5, lines 1-12, page 10, lines 1-8, lines 23-26 and page 11, lines 1-3 of applicant's enabling portion of the specification).

3. The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claims as well as for the further limitations set forth.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee.

Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Claims **1-16, 19-40, 42-56** and **59-75** are allowed.

Conclusion

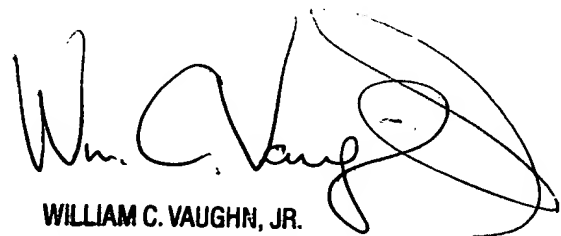
Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaShonda T. Jacobs whose telephone number is 571-272-4004. The examiner can normally be reached on 8:30 A.M.-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LaShonda T Jacobs
Examiner
Art Unit 2157

ltj
January 19, 2006



**WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER**